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ASSESSMENT OF INFORMATION SOURCES USED BY CASSAVA PROCESSORS IN NASARAWA STATE, NIGERIA

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ABSTRACT
This study examined the information sources used by cassava processors in Nasarawa State, Nigeria. The specific objectives were to: examine enterprise characteristics of cassava processors, examine the types of cassava products processed by processors, and determine the sources of information among cassava processors in the study area. A random selection of 30 cassava processors each from Shabu, Anguwan Nungu, Gbude and Gbata communities purposively selected based on their prominence in cassava processing gave a total of 120 sample size for the study. The findings showed that all (100%) of the respondents were engaged in processing of garri and cassava flour. Majority were engaged in the processing of tapioca (95.8%), fufu (84.2%) and edible starch (75.8%).The major sources of information among cassava processors were neighbours/friends (mean=3.49), cassava processors' group (mean=3.24) and extension agents (mean=3.21). Chi-Square test indicated that sources of labour (p=0.014), channel of sales (p=0.001), and measure of product sales (p=0.001) had positive significant association with sources of information accessed for cassava processing by respondents. This study hence recommends the need to strengthen cassava processors' group for effective extension delivery and mobilization of resources needed.
Keywords: information sources, use, cassava processors, products.

INTRODUCTION

Cassava is a vital food crop cultivated in nearly all parts of Nigeria. Globally, Nigeria is unarguably the leading producer of cassava with about 50 million metric tons yearly (FAOSTAT, 2019). Freshly harvested cassava root have only 2 to 3 days shelf-life after which its starts deteriorating (Zidenga *et al.* 2012). The high moisture content of cassava root is the reason for its fast deteriorating process which results to rot and decay of about 50% postharvest losses (Fadebiyi, 2012). This is the reason fresh cassava needs to be processed immediately after harvest.

Processing is indeed one of the leading ways of minimizing cassava loss. The common forms of processed cassava in Nigeria are *garri, lafun, fufu,* flour (*Alebo*), tapioca and chips. Dextrins, starch, syrups, alcohols and dextrose are also products from cassava. Some of these cassava products have become a usual food item in household diets in Nigeria (Onyemauwa, 2010; Emenyonu *et al.*, 2010) and serve as raw materials in different industries (Jackson *et al.*, 2014; Imeh and Odibo, 2013). Cassava processing activities does not only provide food, it is the main source of employment and income for rural populates in Nigeria (Ogundari *et al.*, 2006). The essence of processing is to add values and convert the root into various forms in order to increase its shelf life, reduce seasonality and perishability problems, improve palatability, facilitate easy transportation, improved marketing opportunity of products and improve livelihoods of processors (Olukunle and Jimoh, 2012; Mhazo *et al*. 2012). To achieve these fits, the importance of reliable and timely access to information sources among cassava processors cannot be overemphasis.

Information source is an individual or institution that generates or brings about a message (Statrasts, 2004). The attributes of an excellent information source are its reliability, relevance, accuracy, cost effectiveness, timelessness, exhaustiveness and usability (Statrasts, 2004). The efficiency of agricultural technologies created and disseminated depends on successful communication which is the fundamental process of disseminating information (Oladele (1999). According to Conroy (2003) the quantum of available information about innovation for crop production and processing that are generated by agricultural related research institutes, and faculties of agriculture in universities is quite many. The challenge therefore, lies with efficient dissemination of information about these technologies by the agricultural extension organizations through various communication channels to the farmers and agro-processors (Oladele, 1999). Hence, agricultural processing information disseminated through various sources need to be examined. It is crucial therefore to identify the sources of cassava processing information utilized by processors. It is against this background that this research work is designed to assess the information sources used by cassava processors in Nasarawa State, Nigeria. The specific objectives are to: (i) examine enterprise characteristics of cassava processors, (ii) examine the types of cassava products processed, and (iii) determine the sources of information among cassava processors in the study area.

METHODOLOGY

The study was carried out in Nasarawa State. Nasarawa state is located centrally in the middle belt region of Nigeria and lies between latitude 7º45´ and 9º25N´ of the equator and between longitude 7º and 9º37´E of the Greenwich meridian (Adeyemi, Oloyede and Oladiji, 2007). The state covers a total land area of 27,290km^2. It has a population of over two million people (National Population Commission, 2006). It is predominantly rural with agriculture as its main economic base. Its proximity to Nigeria's Capital Territory has a lot of effect on its landscape and people.

The population of the study comprised of all cassava processors in Nasarawa State. A three stage sampling procedure was adopted to select 120 respondents from the list of contact cassava processors retrieved from Nasarawa Agricultural Development Programme (NADP). First stage was a purposive selection of two (2) Local Government Areas. The selected local government areas were Lafia and

Wamba. The second stage also involved a purposive selection of four (4) communities namely Shabu and Anguwan Nungu communities in Lafia LGA while Gbude and Gbata communities were selected in Wamba LGA. The choice of the selected LGAs and communities is based on their prominence in cassava processing activities. The third stage was a random selection of 30 cassava processors from each community making a total sample size of 120. Data was collected through structured interview schedule and analyzed using frequency counts, percentages, mean scores and Chi-Square test. A list of ten (10) possible sources of information were presented to respondents and measured on 5 point scale of never=1, rarely=2, sometimes=3, often=4, always=5. Mean score of responses for each information sources were generated. Summation of values assigned to scales (15) was divided by number of scale (5) to arrive at 3.0 mean score which was used as benchmark for decision making. Sources with mean score at 3.0 and above were considered as major sources while mean score at 2.99 and below were considered as minor sources.

RESULTS AND DISCUSSION

Enterprise Characteristics of Cassava Processors

The results of data analyzed for the enterprise characteristics of cassava processors are presented in Table 1. The results showed that substantial percentage (59.2%) of the respondents use family labour for cassava processing while about 52.5% sold their cassava products to retailers. Higher percentage (73.3%) used *Congo,* bags and bowl as measuring scale for sales of products. Training on hygienic practices was mostly (63.3%) by extension agents and majority (98.3%) of the processors needed capital. This finding is in line with that of Salau, Bello and Alanji (2013) who found that agro-processors in Nasarawa state faced the problem of inadequate capital.

Table 1: Enterprise characteristics of the cassava processors

Variables	*Frequency*	*Percentage*
Sources of labour		
Hired	37	30.8
Family Labour	71	59.2
Communal	12	10.0
Channel of Sales		
Wholesaler & Retailer	47	39.2
Wholesaler	10	8.3
Retailer	63	52.5
Measure of product Sale		
Congo, bags, bowl	88	73.3
Congo, bowl	2	1.7
Bags	30	25.0
Resources needed		
Capital	118	98.3
Land	1	0.8
Labour	1	0.8
Sources of training on hygienic practices		
Extension agent	76	63.3
Sanitary inspector	9	7.5
None at all	13	10.8
Others	22	4.0

Source: Field survey, 2017

Types of cassava products processed by respondents

The results of the types of cassava products processed by respondents were presented in Table 2. The table showed that all (100%) the processors were engaged in the processing of garri and cassava flour. Majority were engaged in the processing of tapioca (95.8%), fufu (84.2%) and starch (75.8%) while few (20.0%) were engaged in the processing of cassava flour for baking. This finding implies that garri and cassava flour (*Alebo*) products were the common cassava products of processors in the study area. Furthermore, higher percentage of processors' engagement in processing fufu (84.2%), tapioca (95.8%) and edible starch (75.8%) could be attributed to their popular consumption in the North central zone of Nigeria (Matanmi *et al.,* 2017; Kormawa and Akoroda, 2003). This result corroborates the findings of Ogunniyi (2011) who found that the expenditure elasticity of gari and fufu were the highest of cassava products, adding that its demand grows faster than other products as the economy develop and income of buyer increases.

Table 2: Types of cassava products produced by processors

Products	Frequency	Percentage
Garri	120	100.0
Edible starch	91	75.8
Tapioca	115	95.8
Fufu	101	84.2
Cassava Flour (*Alebo*)	120	100.0
Cassava Flour (Baking)	24	20.0

Source: Field survey, 2017

Sources of Information on Cassava Processing frequently used by the Respondents

As presented in Table 3, the major sources of information among cassava processors were neighbours/friends (mean=3.49), cassava processors' group (mean=3.24) and extension agent (mean=3.21). This finding is consistent with Salau, Bello and Alanji (2013) who found that agro-processors in Nasarawa state mainly sourced for information through agricultural extension agents and processing groups. Similarly, studies had reported friends, fellow processors and extension agents as the main sources of information among cassava processors in Kwara state (Adisa *et al.,* 2013, Adefalu *et al.,* 2016).

Table 3: Sources of information on cassava processing frequently used by respondents

Sources	Mean (Std. Dev.)	Mean rank	Status
Newspaper	1.64 (1.282)	8th	Minor
Journal	1.00 (0.00)	10th	Minor
Radio	1.60 (.771)	9th	Minor
Television	2.09 (1.366)	7th	Minor
Agricultural show	2.85 (1.097)	5th	Minor
Meeting	2.98 (1.012)	4th	Minor
Extension agent	3.21 (.859)	3rd	Major
Neighbors/ friends	3.49 (.979)	1st	Major
Government agencies	2.47 (1.100)	6th	Minor
Cassava processors' group	3.24 (1.138)	2nd	Major

Source: Field survey, 2017 Note: 1st – 10th implies highest to lowest.

As indicated in Table 4, sources of labour (p=0.014), channel of sales (p=0.001), and measure of product sales (p=0.001) had positive significant association with sources of information accessed for cassava processing by respondents.

Table 4: Chi-Square test of association between sources of information and enterprise characteristics of cassava processors

Sources of Information	Chi-Square (X^2)	P-value
Sources of labour	46.895*	0.014
Channel of Sales	62.076*	0.001
Measure of product Sales	81.504*	0.001
Resources needed	17.190	0.945
Sources of training on hygienic practices	30.580	0.336
Types of cassava products produced by processors	72.844	0.002

*implies Significant at $p \leq 0.05$

CONCLUSION

The findings of the study revealed that cassava processors in Nasarawa state mainly sourced for information through neighbours/friends, cassava processors' group and extension agents. The study further indicated that sources of labour, channel of sales, and measure of product sales were associating factors that increase usage of information sources for cassava processing. This study hence recommends the need to strengthen cassava processors' group for effective extension delivery and mobilization of resources needed. Since there is less utilization of cassava for cassava baking flour and edible starch thus extension package for cassava processing values addition programme is recommended to focus training and marketing strategies on this areas to cassava processors.

REFERENCES

Adefalu, A. M., Adekunle, O. A. and Komolafe, S.E. (2016). Analysis of gender participation in cassava processing enterprises in Irepodun Local Government Area of Kwara State, Nigeria. *Tropical Agriculture*, 93(3): 209–215.

Adeyemi, O., Oloyede, H. & Oladiji, A.T. (2007). Physiocochemical and microbial characteristics of leachate-contaminated ground water. *Asian J. Biochem*, 2(5): 343-348.

Adisa, R. S., Olatinwo, K. B. and Shola-Adido, O. (2013). Adoption of cassava processing innovations among rural women in Irepodun Local Government Area, Kwara State, Nigeria. *Production Agriculture Technology* (PAT), 9(1): 1-12.

Ashaye, O. A., Obatolu, V. A., Amusa, N. A., Fasoyiro, S. B. and Ayoola, T. A. (2007). Tips and strategies for profitable cassava production, processing and export. Rashmed Publication Ltd, Ibadan. 69 p.

Conroy, A. (2003). New Direction for Nigeria's Basic Agricultural Services: A Discussion Paper. Vol. 1 and Vol. 2: National Stakeholders Workshop on Basic Agricultural Services for Poor Farmers in Nigeria, Abuja. pp. 1 – 63.

Emenyonu, C. A., Inyang, N. N., Ohajianya, D. O., Henri-Ukoha, A., Onyemauwa, S. C. and Kadiri, F. A. (2010). Role of cassava in minimizing household food insecurity in Owerri North L.G.A Of Imo State. *Academia Arena*, 2(10):80-85.

Fadebiyi, A. (2012). Storage methods and some uses of cassava in Nigeria. *Continental Journal of Agricultural Science*, 5: 12–18.

FAO (2019). Food and Agriculture Organization of the United Nations (FAO). FAOSTAT Statistical database, statistical division. Rome. http://www.fao.org/nigeria/fao-in-nigeria/nigeria-at-a-glance/en/

Imeh, S. O. and Odibo, F. J. C. (2013). Production of high protein and low cyanide wet fufu mesh using starter culture. *International Journal of Applied Sciences and Engineering*, 2:48-51.

Jackson, B. A, Oladipo, N. O. and Agaja, M. O. (2014). Cassava: A potential crop for industrial raw material in Nigeria. *International Journal of Life Sciences*, 3 (3):105-112.

Kormawa, P. and Akoroda, M. O. (2003). Cassava supply chain arrangement for industrial utilization in Nigeria. IITA, Ibadan, Nigeria.

Matanmi, B. M., Afolabi, O., Komolafe, S. E. and Adefalu, L. L. (2017). Impact of root and tuber expansion programme: the case of gari processors in Kwara State, Nigeria. *Agricultura Tropica et Subtropica*, 50/2, 109–114.

Mhazo, N., Mvumi, B. M., Elijah N. E. and Nazare, R. M. (2012). The status of the agro-processing industry in Zimbabwe with particular reference to small- and medium-scale enterprises. *African Journal of Agricultural Research*, 7(11):1607-1622.

NPC (2006). Census Report. National Population Commission (NPC). Abuja, Nigeria.

Ogundari, K., Ojo, S. O. and Ajibefun, I. A. (2006). An examination of technical, economic and allocative efficiency of small farms: the case study of cassava farmers in Osun State of Nigeria. *Journal Central European Agriculture*, 7 (3):423-432.

Ogunniyi, L.T. (2011). Household consumption of cassava products in Oyo state. *Global Journal of Science Frontier Research*, 11(6): 39-43.

Oladele, O.J. (1999). Analysis of the institutional research – extension farmers linkage system in South Western Nigerian. An Unpublished Ph.D. Thesis in the Development of Agricultural Extension and Rural Development, University of Ibadan, Nigeria.

Olukunle, O. J. and Jimoh, M. O. (2012). Comparative analysis and performance evaluation of 3 cassava peeling machines. *International Research Journal of Engineering Science, Technology and Innovation*, 1: 94-102.

Onyemauwa, C. S. (2010). Analysis of household consumption of cassava products in Ohaozara, *Ebonyi State, Southeast Nigeria. Researcher*, 2(6): 1-6.

Salau, E. S., Bello, D. and Alanji, J. E. (2013). Access and use of resources by women agro-processors in central agricultural zone of Nasarawa State, Nigeria. *Journal of Agricultural Extension*, 17(2): 139-148.

Starasts, A. M. (2004). Battling the knowledge factor: a study of farmers' information seeking learning and knowledge process with an online environment in Queensland. Unpublished Ph.D. Thesis.

Zidenga, T., Leyva-Guerrero, E., Moon, H., Siritunga, D., and Sayre, R. (2012). Extending cassava root shelf life via reduction of reactive oxygen species production. *Plant Physiology*, 159(4): 1396–1407.